Review Sheet, Part 3 Solutions

① $\frac{33000}{44000} = .75$ $\frac{24750}{33000} = .75$ $r = .75$

exponential
decreasing
continuous (value of boat changing all the time)

② neither
both!
continuous

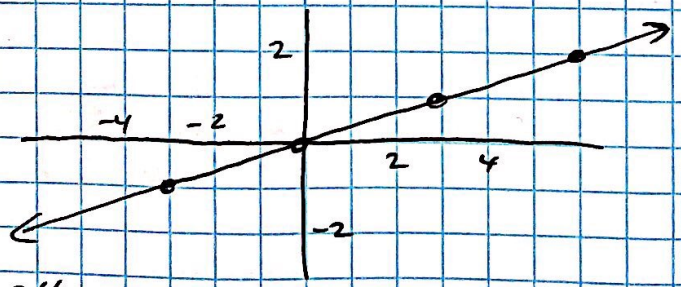
③ linear
neither/constant!
continuous

④ $d = 2$
linear
increasing
discrete (no seats in between rows)

⑤ (a) increasing
(b) 4%
(c) $60,000

⑥ (a) $50 · initial contribution by Dr Mutfillo
(b) doubling the amount every ___
(c) adding $100 every ___
(d) Sanderson + LRHS both start with $50
at first Sanderson will raise more $,
but in the long run, LRHS will win!

⑦ (a) $\frac{1}{3}$
(b) $(-3, -1)$
(c)



⑧ (a) $\frac{-9-15}{8-4} = \frac{-24}{12} = -2$

(b) $y = -2(x-8) - 9$ or $y = -2(x+4) + 15$

(c) $y = -2x + 16 - 9$ $y = -2x - 8 + 15$

$y = -2x + 7$

(9) $\frac{77.50-49.50}{2005-2012} = \frac{28}{-7} = -4$ decreasing by \$4 per year

(10) $y = 12(x-5)+19$
$y = 12x-60+19$
$y = 12x-41$

(11) $y = -\frac{3}{4}(x-16)-7$

(12) $\frac{96-3}{5-0} = \frac{93}{5}$

(13) $y = \frac{93}{5}x+3$

(14)

0	1	2	3	4	5
3					96

$\sqrt[5]{\frac{96}{3}} = \sqrt[5]{32} = 2 = r$

On term

0	1	2	3	4	5
3	6	12	24	48	96
	·2	·2	·2	·2	·2

(15) $y = 3(2)^x$

(16) $+2\ (0,1)\ (2,9)\ +8$ f(x) linear

$\frac{8}{2} = 4 =$ slope

$y = 4x+1$

(17) $+2\ (0,1)\ (2,9)\ \cdot 9$ $\sqrt{\frac{9}{1}} = \sqrt{9} = 3 = r$

g(x) exponential

$y = 1(3)^x$

(18) g(x) will win in long run (exponential grows faster than linear in long run)

(19) continuous — amount of water is changing all the time

(20) discrete — sequences are always discrete

(21) continuous — bacteria is multiplying all the time could stop in between days to measure

(22) discrete — change happening all at once, nothing happening in between

(23) discrete — change happening all at once, nothing happening in between, no parts of tickets

(24) @ exponential
- (b) D
- (c) D
- (d) D
- (e) A

(25) @ linear
- (b) B
- (c) A
- (d) A
- (e) C